Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ESCI7205 hw4

**Due Tue., Sep 27, 2009.**

1) Read Ch 7-10 of the book for class on Th, Sep 29.

We will now start a project to make some maps. This project will take several homeworks to complete. We will do it in parts. The project will use the editor, nawk, sed, and the GMT package. I would like to change the homework due and assignment day to Tuesday, since this will give you 2 days of material in class and then the Thursday to Tuesday period to apply that material in the homework. This HW is therefore short, since it is due in less than a week.

2) Say you are interested in keeping up to date with earthquakes that occur around the world. Someone has told you that “The Advanced National Seismic System” (anss) and the “National Earthquake Information Center“ (neic) have a web page with a “ANSS/NEIS Combined Earthquake List” that reports earthquakes that have occurred during the last two weeks.

We are going to try and make this be “realistic” in the sense that it is something you might actually have to do.

a) Use your favorite browser and search engine to find the page described above. You will see a link for the data and another link that describes what is in the ascii data file. Do not use the “more readable format” version of the file as this file is more readable to a human but not a computer. When you get to the page with the data you will see a cryptic list of earthquakes. The URL (Universal Record Locator) will look like this

ftp://*address*/*path*/*filename*

Notice that the URL does not start with http:, but with ftp:. (ftp stands for “file transfer protocol). This means that you are connected to an ftp server. This also means that you can automatically get that file using the UNIX ftp program.

- Address: is the host name (or IP address) – for alpaca it would be “alpaca.ceri.memphis.edu”

- Path: everything between the end of the address and the final entry. This is a path through directories. It may be empty.

- Filename: the part after the last “/”

What is the

Address:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Path:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

File name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Using your favorite editor create a shell script to get this file. Here is a template for the script. Note that it reports the name of the file it saved.

#!/bin/sh

anssfile=***filename***

ftp -n ***address*** << END

user anonymous ***your email***

cd ***path***

get $anssfile

quit

END

echo $anssfile

You will have to fill in the stuff in bold italics. For example, ***filename*** is the name of the file (not the path) on the web page. You get the ***address*** and ***path*** similarly..

c) After creating this script and making it executable, run it and make sure you get the file in your directory with the correct name whose contents look like what you saw on the webpage.

This is the file that we will be using to make the maps. Notice that once you have the script working, there will be no hand editing needed to get new data and update the map. You can even have the map made automatically on some schedule.